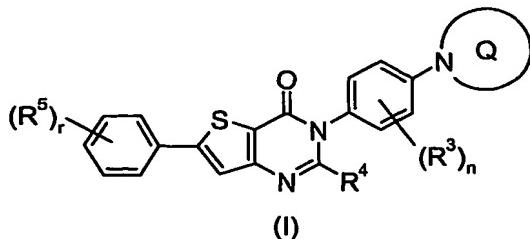


What is claimed is:

1. A compound of Formula (I) comprising:



a pharmaceutically acceptable salt, solvate, or physiologically functional derivative thereof, wherein:

ring Q is a 3-7 membered heterocyclic ring or a 7-11 membered bicyclic heterocyclic ring, wherein said 3-7 membered heterocyclic ring and said 7-11 membered bicyclic heterocyclic ring contain the depicted nitrogen atom and, optionally, 1 or 2 more heteroatoms selected from the group consisting of O and S, and wherein each of said heterocyclic ring and said bicyclic heterocyclic ring is optionally substituted one to four times by at least one substituent selected independently from the group consisting of phenyl, C₁₋₃ alkyl, hydroxy, C₁₋₃ alkoxy, C₁₋₃ hydroxyalkyl, oxo, halo, and -O(CH₂)_qC(O)R⁶ wherein q is 0 to 2 and R⁶ is selected from the group consisting of C₁₋₆ alkyl, C₁₋₆ alkoxy, and aryl;

each R³ is selected independently from the group consisting of C₁₋₆ straight or branched alkyl, C₃₋₆ cycloalkyl, C₁₋₆ alkoxy, C₁₋₃ hydroxyalkyl, trihalomethyl, trihalomethoxy, amino, C₁₋₆ alkylamino, C₁₋₆ dialkylamino, hydroxy, cyano, acetyl, C₁₋₆ alkylthio, and halo; and n is 0 to 4;

R⁴ is selected from the group consisting of hydrogen, C₁₋₆ straight or branched alkyl, C₃₋₆ cycloalkyl, and C₁₋₃ alkylthio;

each R⁵ is selected independently from the group consisting of C₁₋₆ straight or branched alkyl, C₃₋₆ cycloalkyl, C₁₋₆ alkoxy, trihalomethyl, trihalomethoxy, amino, C₁₋₆ alkylamino, C₁₋₆ dialkylamino, hydroxy, cyano, acetyl, C₁₋₆ alkylthio, and halo; and r is 0 to 5, with the proviso that when r is 0,

the ring Q is substituted one to four times by at least one substituent selected independently from the group consisting of phenyl, C₁₋₃ alkyl, hydroxy, C₁₋₃ alkoxy, oxo, and halo.

2. The compound according to Claim 1 wherein ring Q is a 5-6 membered heterocyclic ring or a 7-10 membered bicyclic heterocyclic ring, and wherein said heterocyclic ring and said bicyclic heterocyclic ring are optionally substituted one to four times by at least one substituent selected from the group consisting of C₁₋₃ alkyl, hydroxy, C₁₋₃ alkoxy, oxo, halo, and -O(CH₂)_qC(O)R⁶ wherein q is 0-1 and R⁶ is selected from the group consisting of C₁₋₃ alkyl, C₁₋₃ alkoxy, or aryl.
3. The compound according to Claim 2 wherein ring Q is a 5-membered heterocyclic ring substituted one time.
4. The compound according to Claim 3 wherein ring Q is 3-hydroxypyrrolidine.
5. The compound according to Claim 1 wherein n is 0 to 2..
6. The compound according to Claim 5 wherein each R³ is selected from the group consisting of C₁₋₃ straight or branched alkyl, C₁₋₃ alkoxy, trihalomethyl, C₁₋₃ dialkylamino, cyano, acetyl, C₁₋₃ alkylthio, and halo; and n is 1.
7. The compound according to Claim 6 wherein R³ is methoxy.
8. The compound according to Claim 1 wherein R⁴ is selected from the group consisting of hydrogen and a C₁₋₃ straight or branched alkyl.
9. The compound according to Claim 8 wherein R⁴ is hydrogen.

10. The compound according to Claim 1 wherein each R⁵ is selected from the group consisting of C₁₋₃ straight or branched alkyl, C₁₋₃ alkoxy, trihalomethyl, C₁₋₃ dialkylamino, cyano, acetyl, C₁₋₃ alkylthio, and halo; and r is 1 or 2.

11. The compound according to Claim 10 wherein R⁵ is halo; and r is 1.

12. The compound according to Claim 11 wherein R⁵ is chloro.

13. The compound according to Claim 1 wherein the compound is selected from the group consisting of

6-(4-chlorophenyl)-3-{4-[(3R)-3-hydroxypyrrolidin-1-yl]-3-methoxyphenyl}thieno[3,2-d]pyrimidin-4(3H)-one;

6-(4-chlorophenyl)-3-{4-[(3S)-3-hydroxypyrrolidin-1-yl]-3-methoxyphenyl}thieno[3,2-d]pyrimidin-4(3H)-one;

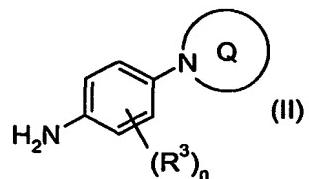
6-(4-fluorophenyl)-3-{4-[(3R)-3-hydroxypyrrolidin-1-yl]-3-methoxyphenyl}thieno[3,2-d]pyrimidin-4(3H)-one; and

6-(4-chlorophenyl)-3-(3-methoxy-4-pyrrolidin-1-ylphenyl)thieno[3,2-d]pyrimidin-4(3H)-one.

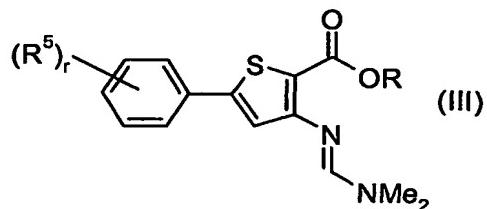
14. The compound according to Claim 13 wherein the compound is 6-(4-chlorophenyl)-3-{4-[(3R)-3-hydroxypyrrolidin-1-yl]-3-methoxyphenyl}thieno[3,2-d]pyrimidin-4(3H)-one.

15. The compound of Claim 1, a salt, a solvate, or physiologically functional derivative thereof in combination with at least one species selected from the group consisting of an agent for treating diabetes, an agent for treating hypertension, and an agent for treating arteriosclerosis.
16. The compound of Claim 1, a salt, a solvate, or a physiologically functional derivative thereof in combination with at least one species for the treatment of obesity selected from the group consisting of (i) human ciliary neurotrophic factor, (ii) a CB-1 antagonist or inverse agonist, (iii) a neurotransmitter reuptake inhibitor, (iv) a lipase inhibitor, (v) an MC4R agonist, (vi) a 5-HT2c agonist, (vii) a ghrelin receptor antagonist, (viii) a CCK-A receptor agonist, (ix) an NPY Y1 antagonist, (x) PYY₃₋₃₆, and (xi) a PPAR activator.
17. A method of treating obesity, diabetes, depression, or anxiety in a mammal comprising the administration to said mammal of an effective amount of a compound of Claim 1, a pharmaceutically acceptable salt, solvate, or physiologically functional derivative thereof.
18. The method of claim 17 wherein said mammal is a human.
19. A method of treating obesity, diabetes, depression, or anxiety in a mammal comprising the administration of an effective amount of a pharmaceutical composition containing a compound of Claim 1, a pharmaceutically acceptable salt, solvate, or physiologically functional derivative thereof and pharmaceutically acceptable excipient to said mammal.
20. The method of claim 19 wherein said mammal is a human.

21. A process for preparing a compound of Formula (I) according to claim 1 comprising reacting an aniline of Formula (II)

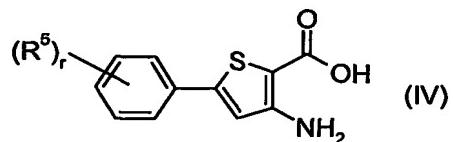


with a compound of Formula (III)

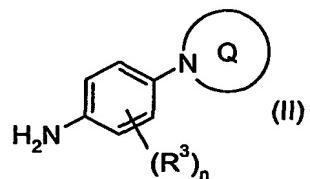


while heating in a solvent; wherein ring Q, R³, R⁵, n, and r are as defined in Formula (I), R is C₁₋₄ alkyl, and R⁴ is H.

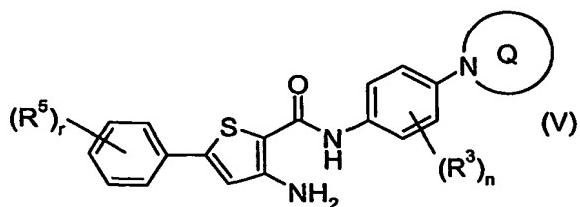
22. A process for preparing a compound of Formula (I) according to claim 1 comprising coupling an amino acid of Formula (IV)



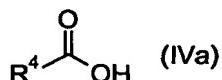
with an aniline of Formula (II)



in a solvent in the presence of at least one coupling agent to produce a compound of Formula (V)

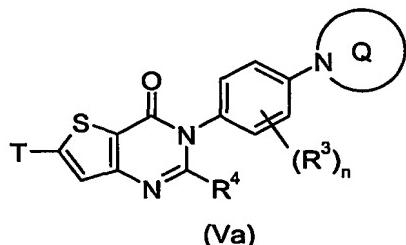


and cyclizing said compound of Formula (V) with an acid of Formula (IVa)



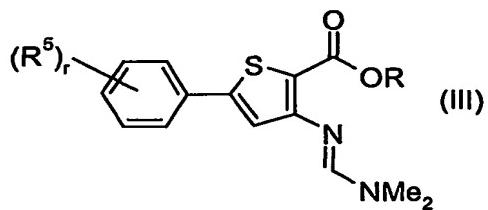
to form a compound of Formula (I) and wherein ring Q, R³, R⁴, R⁵, n, and r are as defined in Formula (I).

23. A process for preparing a compound of Formula (I) according to claim 1 comprising reaction of a compound of Formula (Va)

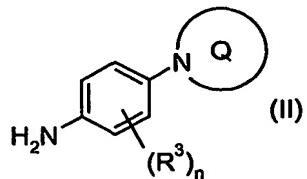


(i) with a boronic acid and a palladium catalyst using a Suzuki coupling reaction or (ii) with an organostannane reagent and a palladium catalyst using a Stille coupling reaction and wherein ring Q, R³, R⁴, n, and r are as defined in Formula (I) and T is a leaving group.

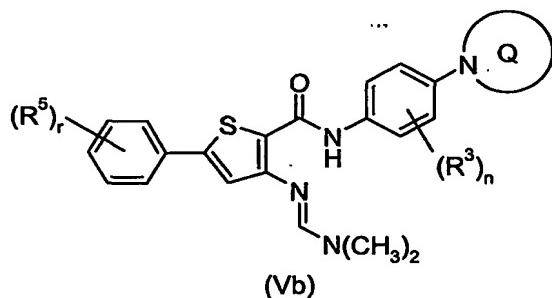
24. A process for preparing a compound of Formula (I) according to claim 1 wherein R⁴ is hydrogen comprising coupling an amino ester of Formula (III) wherein R is C₁₋₄ alkyl



with an aniline of Formula (II)

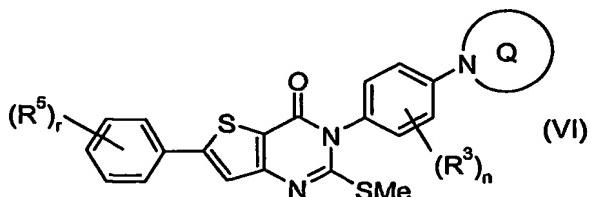


in a solvent in the presence of trimethylaluminum to produce a compound of Formula (Vb)



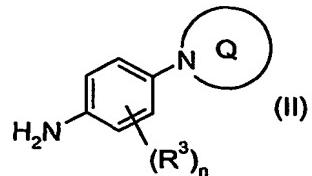
and cyclizing said compound of Formula (Vb) to form a compound of Formula (I) and wherein ring Q, R³, R⁵, n, and r are as defined in Formula (I).

25. A process for preparing a compound of Formula (I) according to claim 1 wherein R⁴ is hydrogen comprising reacting a sulfur-containing compound of Formula (VI)

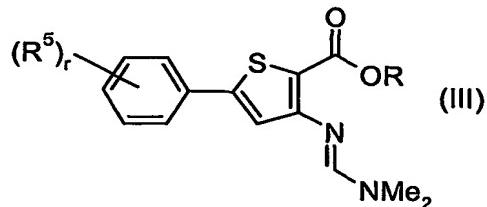


with a Raney nickel reducing agent in the presence of a solvent and wherein ring Q, R³, R⁵, n, and r are as defined in Formula (I).

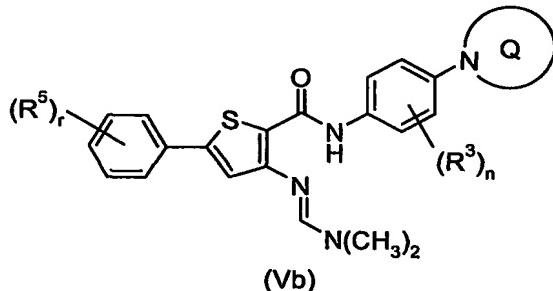
26. A process for preparing a compound of Formula (I) according to claim 1 wherein R⁴ is hydrogen comprising the treatment of an amine of Formula (II)



with a strong base such as sodium hexamethyldisilazane and reaction with an ester of Formula (III) wherein R is C₁₋₄ alkyl



in a solvent such as tetrahydrofuran to produce a compound of Formula (Vb)



and cyclizing said compound of Formula (Vb) to form a compound of Formula (I) and wherein ring Q, R³, R⁵, n, and r are as defined in Formula (I) and R⁴ is hydrogen.

27. The use of a compound of Formula (I), a salt, a solvate, or physiological derivative thereof in the manufacture of a medicine, especially a medicine for the treatment of obesity, diabetes, depression, or anxiety in a mammal, preferably a human.